LIFE SPAN DEVELOPMENT

a six-unit lesson plan for high school psychology teachers

Susan Krauss Whitbourne, PhD, University of Massachusetts, Amherst

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This unit is a revision of the original TOPSS Unit Lesson Plan on *Development*, originally prepared by Lynne Fellers, Nancy Grayson, Michael Sullivan, and Martha Whitacre and edited by Charles T. Blair-Broeker at the Texas A&M-NSF Summer Institute for the Teaching of AP and Honors Psychology in July 1992.

This unit is aligned to the following content standards of the ***National Standards for High School Psychology Curricula*** (APA, 2011):

Standard Area: Life Span Development

Content Standards:

After concluding this unit, students understand:
1. Methods and issues in life span development
2. Theories of life span development
3. Prenatal development and the newborn
4. Infancy (i.e., the first 2 years of life)
5. Childhood
6. Adolescence
7. Adulthood and aging

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procedural timeline

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introduction

Developmental psychology is increasingly becoming a psychology of the life span rather than being limited to the psychology of infancy to adolescence. The goal of this unit plan is to present ideas that will help teachers provide students with a broad-based, contemporary view of the field that will also give them an excellent grasp of both the conceptual issues and practical applications of knowledge about change over the life span.

Students can easily relate to many of the topics covered in this unit. Obviously, they can reflect on their own developmental changes from childhood through adolescence, but they also can relate the material to changes among their families and friends. The content in this unit could be of great help to students as they plan their futures. Themes such as health, identity, relationships, parenting, education, and work have universal significance.

With the growing focus on diversity in the field of human development, the topic also provides an excellent way to incorporate insights from research on cultural, ethnic, geographical, and socioeconomic diversity. Developmental psychology is increasingly taking a contextual approach that places great importance on many types of variations in human growth and change.

Finally, as students prepare for future careers, they will benefit from learning in particular about the field of adult development and aging. Adults age 65 and older constitute the fastest-growing segment of the population, and in many parts of the world, the growth will continue at far more disproportionate rates compared to other age groups in the population.

The topic of life span development also presents valuable opportunities for instruction in the area of research methods. Because age is not a true independent variable, it is not possible to conduct experimental studies. Learning how researchers attempt to overcome this challenge presents interesting ways to engage students' critical thinking abilities. Related to this point is the fact that the age of the individual is confounded with the historical period in which the individual grows older. The so-called "cohort" and "time of measurement"

effects that can appear to be changes due to age cannot be entirely ruled out when examining any study on life span development. There are designs that make it possible to evaluate the impact of these factors, but cohort and time of measurement effects can never be entirely eliminated. Many studies using the cross-sectional method (in which participants from different age groups are compared at one point in time) fail to control for between-cohort differences. Encouraging students to question the results of these studies provides valuable lessons in evaluating research evidence in psychology.

You can also use the material in this unit to emphasize the role of biology in behavior. Changes in each system of the body interact in important ways with psychological changes in areas such as cognition, emotions, and identity. In addition, the "nature–nurture" issue presents numerous complexities regarding the interaction between genetic and environmental influences on development. Research emerging in recent years is showing increasingly that it's not just a matter of nature and nurture as joint influences on the individual, but that nurture can also influence nature. Discussion of these complexities can introduce students to an important emerging area of research and at the same time can stimulate students to think about one of the great philosophical issues in psychology—that of free will versus determinism.

Finally, students can benefit from examining the material on later adulthood from the point of view of stereotypical views of aging, also known as "ageism." Once sensitized to this issue, students can be asked to bring in situations from fiction and everyday life that exemplify these attitudes. Encouraging them to challenge these stereotypes will foster the development of important sensitivities that will help them in relationships with their families and their work lives.

As a practical matter, you need to decide whether to cover development from the topical or chronological perspective. This decision will most likely be determined by the textbook your school adopts. In general, though, the topical approach has the advantage of emphasizing continuity rather than dividing the life span into discrete units, but students find it easier to relate to the chronological approach. You can split the difference somewhat, however, by emphasizing continuity within the chronological approach and by teaching about theories of development with an emphasis not on stages but on the principles of the theories themselves. The majority of developmental theories are not as strictly age based as many people think. As you'll learn, Erikson, Piaget, and Kohlberg, perhaps the three most influential developmental theorists, believed that the ages associated with the stages were approximations.

content outline

LESSON 1: METHODS AND ISSUES IN LIFE SPAN DEVELOPMENT

In this lesson, you will introduce students to the general issues that developmental psychologists examine and how they collect their data.

See Activity 1.1—Introductory Survey and Content Discussion (In Activities section)

I. Nature and nurture in development: Development is influenced by both "nature," or heredity, and "nurture," or the environment.

A. Although each individual inherits a specific pattern of genes from his or her parents, the expression of those genes is influenced by the environment in which the individual grows.

B. It no longer is a case of nature versus nurture because researchers understand that both play a role in influencing the changes throughout life.

C. Furthermore, specific environmental factors can influence the expression of genes.

EXAMPLE—Maternal stress may alter the genetic material of her fetus. Similarly, in later adulthood, an individual may have a genetic risk for developing Alzheimer's but not be afflicted by the disorder if he or she is intellectually or physically active.

See Activity 1.2: Nature and Nurture in Development (in Activities section)

D. The nature–nurture discussion deals with the extent to which heredity

and the environment influence our behavior. Behavioral genetics studies the role played by inheritance in mental ability, temperament, emotional stability, and so on. See APA's *Biological Bases of Behavior* unit lesson plan for additional information on behavioral genetics.

II. Continuity and change in development

A. For ease of studying life span development, we speak of stages from infancy through old age, but in reality, people develop in continuous fashion throughout life. Even periods marked by specific biological changes, such as puberty and the climacteric (menopause in women), occur in gradual fashion.

B. The related issue of stability versus change in development refers to the question of whether individuals' dispositions change as they get older.

1. Personality researchers in particular have attempted to determine whether there are dispositions that remain consistent over life.

EXAMPLE—Is the difficult and colicky child destined to become a neurotic, anxious, and worrying adult?

2. Although a flurry of studies on this topic preoccupied personality researchers throughout the 1980s and 1990s, the field seems to have arrived at somewhat of a consensus on personality dispositions as influences on life choices, which, in turn, further influence personality (nature and nurture once again).

3. Moreover, even researchers who at one time believed, along with William James, that personality was fixed by the age of 30, now acknowledge that changes in traits can continue to occur throughout old age.

III. Critical periods: In early development in particular, certain factors must be present at specific ages for growth to occur normally.

A. Critical periods can involve biological changes, such as the growth of the nervous system, which may be affected negatively by maternal illness early in pregnancy.

B. Critical periods can also involve the development of sensory abilities, such as depth perception in early infancy.

EXAMPLE—Early infancy, during which the attachment bond is developed, is an example of a critical period in social/personality growth.

C. In general, as individuals grow older, the relevance of critical periods weakens considerably. At later ages, there is evidence instead for considerable plasticity. People may suffer injuries or illnesses which they compensate for by recruiting other abilities.

EXAMPLE—Older adults who have cerebral hemorrhage and lose language abilities can regain almost all, if not their entire, verbal facilities.

D. Critical periods are also referred to as sensitive periods since the term *critical period* implies that something has to happen in a specific time period to develop normally (e.g., imprinting in ducks and geese).

ACTIVITY: *Ask students to think about how much they've changed since they were younger. Have them bring in photos or videos of themselves without identifying them and see if the other students can guess who is who.*

ACTIVITY: *Have students provide examples from their own online research of people who showed examples of plasticity. For instance, in late 2012, Representative Gabby Giffords, who suffered a severe head wound when a gunman attacked her, was regaining her lost abilities. Other examples include children who lose a substantial portion of brain tissue due to injury or illness but whose brains recruit alternate brain regions.*

IV. Definitions of basic terms

It is helpful to give students these working definitions:

A. **Life span:** The biological limits to life's length, determined by species-specific hereditary factors

B. **Life expectancy:** The average length of time that a given age-based cohort is expected to live

This can be counted from birth or from any point in life. Life span has not increased in recent decades, but life expectancy has.

C. **Life course:** The term used by sociologists to refer to the normal, expected set of events that take place over an individual's life, determined in many ways by the society's norms

V. Research methods in life span development

A. Studies designed to investigate developmental change can be grouped roughly into two categories: descriptive and sequential.

All research on development is, by definition, quasiexperimental. If age or gender is used as an independent variable, the experiment cannot be true because age and gender cannot be randomly assigned as treatment variables. However, experimental manipulations can be performed to test whether certain conditions have differential impact on different age groups.

EXAMPLE—Children in the 5- to 7-year-old range may benefit more, for example, from auditory instructions in a memory task than visual instructions; if the opposite pattern holds for children in the 9- to 11-year-old range, the researcher can infer that children in these age groups acquire information through different cognitive processes. Since this is an interaction between a variable that can be randomly assigned and one that cannot, it is a quasiexperimental design.

B. Another problem with research on aging is that samples become increasingly less representative in increasing age ranges of samples.

EXAMPLE—Adults in their 80s are a select group compared to adults who did not live to be that age. Selection biases can operate in samples of adults as young as 25 or 30 years old given the high rates of accidental deaths before the age of 25.

1. People who engage in more high-risk behaviors, therefore, may not live to be in the population studied, and it may appear that impulsivity decreases with age when in reality, the impulsive people can no longer be studied because they did not survive to that age.

2. Similarly, people who live until an advanced age are, by definition, in better health than those who are no longer alive or are too ill to participate in research.

VI. Three main concepts underlying research in development:

A. **Age:** The chronological age of the individual

B. **Cohort:** The historical period in which the individual was born

C. **Time of measurement:** The historical period in which testing takes place

D. Because any one of these numbers is automatically determined once the other two are known, researchers can never know whether a particular pattern of findings is due to age itself or to historical period (of birth or testing).

ACTIVITY: *Ask students to list factors specific to their own cohort and factors specific to the current period of time.*

VII. Descriptive research designs. Three types of studies are considered "descriptive" because they do not attempt to separate personal from social aging:

A. **Cross-sectional:** Individuals from different cohorts are compared at one point in time.

B. **Longitudinal:** Individuals from one cohort are followed over several time periods.

C. **Time lag:** Individuals of the same age who were born at different times and are being tested in the same year are compared, e.g., such as comparing different generations of high school students on the same measure. Holding age constant points out generational differences.

VIII. Sequential research designs

The *time-sequential design* is one in which a longitudinal study is replicated on more than one cohort. Essentially, this design attempts to replicate the findings of one longitudinal study by repeating it on different samples born at different times. Thus, it is much like any replication of a scientific finding, except that in this case, the replication occurs specifically to test the impact of historical time. For example, in the Seattle Longitudinal Study of adult intelligence, Warner Schaie and his collaborators followed a number of cohorts over 7-year intervals. They found different patterns of changes in intelligence among cohorts born in different years. Had they followed only one set of individuals over time, rather than repeating the longitudinal analysis, they would have made erroneous conclusions about aging and intelligence.

IX. Twin studies: Twin studies were thought to provide clear-cut evidence on the nature–nurture issue. However, they are now increasingly being questioned on several grounds.

A. Only a small minority of monozygotic twins (1%) are truly identical; 20-25% are dichorionic diamniotic (two placentas and two amniotic sacs). The remainder are monochorionic diamniotic (one placenta and two amniotic sacs). This means that most identical twins actually had

different prenatal environments, which could differentially have affected their growth. These differences can persist throughout life.

B. The most common twin study is that which compares identical (monozygotic) and same-sex fraternal twins (dizygotic) with genetic factors indicated by a higher similarity (concordance rate) for monozygotic than dizygotic twins. This type of design is criticized because of the assumption that monozygotic and dizygotic twins share identical environments because they are reared at the same time. In fact, dizygotic twins are more likely to be treated differently than monozygotic twins.

C. Previous studies on identical twins reared apart exaggerated similarities and ignored differences. The very impressive books and documentaries showing the similarities between identical twins who never met until adulthood tended to report the hits but not the misses between them. These studies might be criticized because of the degree to which monozygotics split at birth experience very different environments.

ACTIVITY: *Ask students how those (or friends) who are twins or multiples are the same and how they are different.*

ACTIVITY: *Show students a video documentary in which twins reared apart are highlighted. Ask students to list the challenges to claims that the amazing coincidences between them reflect genetics. For example, twins may have both married women named "Linda," but considering how common the name is, does this truly reflect genetics? Even if twins have rarer or more unusual similarities, encourage students to think about challenges to the notion that these are genetically based. You can also use this as a chance to stress the importance of challenging anecdotal accounts as scientific evidence.*

LESSON 2: THEORIES OF LIFE SPAN DEVELOPMENT

In this lesson, you will cover the major theories of cognitive, moral, and personality/social development. These form the basis for the specific theories you will cover in the three lessons that follow dealing with periods of life. In teaching these theories, it is helpful to bring them to life with as many examples and activities as possible. Fortunately, these theories lend themselves well to such an approach.

I. Cognitive theories of child development. The three major cognitive development theories attempt to explain how we gain knowledge about the world as we progress from infancy through adulthood. Though these theories are complex and multifaceted, you can present them to high school students in a way that brings them to life and gives students a sense of how the theories attempt to explain the fascinating process of cognitive development.

A. **Piaget:** The theory of Swiss psychologist **Jean Piaget** is most commonly taught in terms of stages, from sensorimotor to formal operations. Students will understand these stages better if you also teach them about the processes of development that underlie the transitions between the stages. Piaget based his approach to cognitive development on observations he made of his own children; subsequent researchers examined developmental changes in terms of children's abilities to solve problems.

1. Piaget defined intelligence as the ability to adapt to the environment through an equilibration process.

2. The processes of child development involve the child's increasing his or her adaptation to the environment in a dynamic equilibrium between using his/her existing ideas about the world and changing those ideas in response to his/ her experiences.

3. The three fundamental concepts for students to understand are:

    a. **Schema:** A concept or category about the world

    b. **Assimilation:** The tendency to interpret new experiences in terms of existing schemas

    c. **Accommodation:** Changes in schemas to incorporate information from experiences

4. According to Piaget, a child's development progresses through four stages, resulting in increases in the child's ability to adapt to and understand the world. Piaget framed these stages in terms of problems children can or cannot solve. At each stage, children reorganize their ability to understand the world. It's not that they know "less" than adults do, it's that they know "differently."

5. These stages and their approximate ages are listed below. However, even as children and adults become better adapted to their environment, everyone nevertheless relies on less cognitively mature processes to solve problems throughout their lives.

    a. **Sensorimotor (birth to 18 months):** The child understands the world in terms of actions, not words.

    b. **Preoperational period (18 months to 7-8 years):** The child is unable to use logical operations to solve problems and does not understand concepts such as reversibility. During this period the child can only see problems from one perspective, a phenomenon referred to as "egocentrism." Due in part to the lack of reversibility, children in this stage don't understand the concept of conservation (a concept in which properties such as volume, mass, and number remain the same despite changes in forms of objects).

    c. **Concrete operational (7-8 years to 11-15 years):** The child can solve logical problems but only in the here and now. He or she is unable to use logical symbols, such as those used in algebra, to solve problems, including conservation problems.

    d. **Formal operational (11-15 years to adulthood):** Older children, adolescents, and adults gradually become able to solve problems using abstract symbols and logic.

6. There may be cultural variations in the ages at which these stages are reached.

ACTIVITY: *Demonstrate Piaget's concept of conservation with a problem such as asking students to estimate the group of calories in a group of large pieces of candy versus a larger number of smaller pieces of candy. Even adults will mistakenly judge the larger number of small pieces of candy to have more calories. Or you can do a classic conservation task by starting with two identical large candy bars, breaking one into smaller pieces, and asking if the total amount of the candy bar has changed. You can also ask how a young child might respond to that question.*

ACTIVITY: *Bring into class a set of items in pairs that are the same or similar in amount but are different in their configuration. For example:*

- *Two perfume bottles with the same amount of perfume but in different shaped bottles*
- *Two boxes of pasta, 1 pound each, one of long and thin pasta (Spaghetti) and one of wide and short pasta (Ziti)*
- *Two cans of fruit, which are of different weights, but the smaller one actually weighs more.*

Then ask for a volunteer to judge whether the objects in each set of two are the same or different amounts. Chances are that the volunteer will make a few mistakes, demonstrating that conservation is not necessarily established by the age of 8 years, and that even adults can be fooled!

ACTIVITY: *The Wason card task is another you can use to demonstrate how adolescents gradually become able to use formal operations. See this Wason example online: http://www.philosophyexperiments.com/wason/Default.aspx.*

B. **Vygotsky:** According to the Russian psychologist **Lev Vygotsky**, children learn through social interaction, including play with peers and parents.

1. Vygotsky emphasized two processes in children's cognitive development:

a. **Zone of proximal development (ZPD)** is the area of knowledge just beyond a child's abilities. According to Vygotsky, children learn best when they encounter information at this level and can interact with a more skilled person.

b. **Scaffolding** is the kind of support adults and teachers present when they provide progressively more difficult problems or ask children to explain their reasoning for learning (within the ZPD) that enables children to work independently but with help so they can solve problems and develop their cognitive abilities more generally.

ACTIVITY: *Demonstrate the social processes involved in learning by asking two students to try to solve a difficult math word problem. You can also demonstrate scaffolding by providing gradually more complete hints.*

C. **Information processing:** The information processing approach to cognitive development proposes that children develop their cognitive abilities in an incremental manner, in some cases corresponding to the development of the brain. Two concepts important in the information processing approach are:

1. **Metacognition:** Children become better at solving problems because they develop more conscious awareness of their cognitive activities and can use this awareness to select or change strategies, including better knowledge about how to direct their attention and effectively use their short-term/working memory and long-term memory.

2. **Development is continuous:** Children do not experience discrete changes or move from one stage to another.

II. Psychosocial theories of development

A. **Kohlberg's theory of moral reasoning:** Psychologist **Lawrence Kohlberg** expanded on Piaget's cognitive development theory by proposing that children's cognitive abilities influence the growth of their ability to make moral judgments. Also, both argue that moral reasoning develops mainly through interactions with slightly more morally advanced peers. As their cognitive abilities mature, children are able to see the relative (abstract) pros and cons of different moral positions after they pass the stage of concrete operations. Compared to Piaget's theory, Kohlberg developed these ideas in much more detail, and, although there are controversies associated with both the theory and the research on which it is based, Kohlberg's theory provides a comprehensive framework for understanding how we develop our sense of right and wrong.

There are six stages in Kohlberg's theory, but they are more easily taught in terms of the three categories into which they fall. Although each stage is identified with an age period, it's possible for adults to operate at lower levels of reasoning, and according to Kohlberg, many do.

1. **Preconventional (young children):** Right and wrong are thought of in terms of their immediate effects of pleasure versus pain. No moral principles are invoked.

2. **Conventional (middle school children):** Moral decisions are made in terms of laws or general rules about what is right and what is wrong. In this law and order stage, for example, people base their judgments on whether a law is broken or not.

3. **Postconventional (adolescents and adults):** Decisions about right and wrong are based on the notion of moral relativity. A law should be violated if that law violates basic principles of valuing human life above all else.

ACTIVITY: *Give students the "Heinz dilemma" in which they answer the question of whether it is right for a man to steal an expensive drug to save his dying wife. Have students rate their own responses to the question or have them rate each other's responses.*

B. **Erikson:** According to Danish psychologist **Erik Erikson,** development occurs through a series of changes in the abilities of the ego (rational component of personality). Like Piaget, Erikson proposed a set of stages, but he did not intend that the stages be understood as steps in a ladder. Instead, he maintained that people can grapple with any psychosocial issue at any age. To present Erikson's theory correctly, you should show his original matrix of ages and stages (presented on page 14) rather than just the names of the stages alone. The diagonal

in this matrix represents the usual, expected pattern of psychosocial development because people are most likely to confront these issues when they are in a particular age period. However, Erikson also proposed that people can confront psychosocial issues in the "off diagonal" portions of the matrix because the issues are not intrinsically linked to age or portion of life.

The eight stages follow; you can either present all of them at once or break them into age periods along with subsequent lessons.

1. **Basic trust versus basic mistrust (0 –18 months):** Children must establish a sense of being able to rely on the environment (and caregivers) to take care of them.

2. **Autonomy versus shame and doubt (18 months –3 years):** Children learn ways to be able to act independently from their parents without feeling afraid they will venture too far off on their own.

3. **Initiative versus guilt (3 –5 years):** This is the play stage in which children learn to express themselves creatively without fear they will engage in activities that will get them in trouble.

4. **Industry versus inferiority (5 –12 years):** During this stage, children learn to identify with the world of work and develop a work ethic.

5. **Identity versus identity diffusion (12 –21 years):** Adolescents establish a sense of who they are and develop commitments in the areas of work and values.

6. **Intimacy versus isolation (21 –30/40 years):** Young adults are able to experience psychologically close relationships with others and develop long-term commitments.

7. **Generativity versus stagnation (40–65 years):** Middle-age adults feel a sense of caring and concern for the younger generation and determine what their legacy will be after they are gone.

8. **Ego integrity versus despair (65 years till death):** In later adulthood, individuals come to grips with mortality and with achieving a sense of acceptance about the life they have lived.

ERIKSON'S ORIGINAL MATRIX OF AGES AND STAGES

Ages (approx.)	Stage #1	Stage #2	Stage#3	Stage #4	Stage #5	Stage #6	Stage #7	Stage#8
65+								Ego Integrity vs. Despair
30-65							Generativity vs. Stagnation	
21-30						Intimacy vs. Isolation		
12-21					Identity vs. Role Diffusion			
6-12				Industry vs. Inferiority				
3-6			Initiative vs. Guilt					
1½-3		Autonomy vs. Shame & Doubt						
0-1½	Trust vs. Mistrust							

ACTIVITY: *Mix up the stages with examples of each one and ask students to identify the stage that seems to be associated with each example. You can also have students imagine situations in which people must cope at various ages with issues from psychosocial stages, such as these examples:*

- *A three-year-old is diagnosed with bone cancer. This shows Ego Integrity versus Despair at ages 3–5 years. The child is confronted with end-of-life issues.*
- *An 80-year-old woman is mugged. This shows Basic Trust versus Basic Mistrust in later adulthood. The woman must regain a sense of confidence or faith in the safety of her environment.*
- *A divorced middle-aged man is considering remarriage. This shows Intimacy versus Isolation in middle adulthood. The man is confronted with issues of intimacy.*
- *A 16-year-old has the keys to his car taken away by his parents. This shows Autonomy versus Shame and Doubt in adolescence. The teenager's parents have constrained his independence.*
- *A 35-year-old woman enjoys time with her child when she and her child can play with her child's blocks. This shows Initiative versus Guilt in middle age. The woman is enjoying the opportunity to explore and play.*
- *A 64-year-old man is fired from his job and worries about whether he will find another one. This shows Industry versus Inferiority in later adulthood. The man is experiencing issues related to feelings of competence.*

C. **Attachment theory:** According to British psychologist **John Bowlby**, children develop an inner representation of their relationship with their primary caregivers. This inner representation, or working model, becomes the basis for their subsequent adult relationships.

D. Bowlby's work became the basis for the research by American psychologist **Mary Salter Ainsworth**, who devised an experimental situation to assess a child's attachment style. In this experiment, called the strange situation, young children play in a room with their mother. The mother leaves the room and then returns. The experimenter rates the child's reaction both when she leaves the room and when she returns. The attachment styles are as follows:

1. **Securely attached:** The child seems disturbed but not distressed when the mother leaves and greets her happily when she returns.

2. **Insecurely attached:** The child may or may not become anxious or distressed when the mother leaves the room and may either ignore her or be ambivalent about physical contact when she returns.

E. **Harry Harlow** showed the importance of maternal attachment bonds in his work with infant monkeys. Raised with wire monkeys that fed them or cloth monkeys that provided physical stimulation, the monkeys preferred the cloth mothers. This research, though controversial, was vital in establishing the importance of early bonding through contact comfort with caregivers.

III. Sociocultural theories of development

A. **Bronfenbrenner:** According to Cornell psychologist **Urie Bronfenbrenner**, social environment exerts both direct and indirect effects on child development. He identified five systems of influence on development, ranging from fine-grained inputs of direct interactions with social agents to broad-based inputs of culture. How well these systems interact can greatly affect the development of the child. (*Note*. Your textbook might not cover Bronfenbrenner, but his is an important sociocultural theory.)

1. **The five systems include:**

a. **Microsystem:** Setting in which an individual lives—family, peers, school, neighborhood

b. **Mesosystem:** Relations between microsystems, connections between contexts, relation of family experiences to neighborhood, school to church, family to peers, and so on

c. **Exosystem:** Experiences in a social setting in which an individual does not have an active role but which nevertheless influences experience in an immediate context

d. **Macrosystem:** Attitudes and ideologies of the culture in which individuals live

e. **Chronosystem:** The patterning of environmental events and transitions over the life course; effects created by time or critical periods in development

2. Examples of cultural diversity should be considered for this theory; for example, for children of lower socioeconomic status (SES), each of the five systems above might influence children differently compared to children of higher SES.

ACTIVITY: *Have students identify influences on their development from within the five systems.*

B. **Baltes:** Life span developmental psychologist **Paul Baltes** identified three social influences on the course of development. These interact in ways that result in the patterning of specific life events:

1. **Age-graded normative influences:** The expectations associated with specific ages reflected in a given culture.

2. **History-graded normative influences:** The effects of living in a given time and place that have similar influences on people within that society.

3. **Nonnormative influences:** Random, unpredictable influences that are idiosyncratic to each individual

ACTIVITY: *Have students identify these three influences in their own lives and those of family members.*

Information on social cognitive theory and observational learning can be found in the TOPSS Unit Lesson Plan on Learning.

LESSON 3: PRENATAL DEVELOPMENT AND THE NEWBORN

I. Prenatal development: Students need to become familiar with the stages of prenatal development as well as the influences that can harm a child's physical and psychological development.

A. The three stages are:

1. **Zygote:** Conception to 2 weeks

2. **Embryo:** 2 to 8 weeks

3. **Fetus:** 8 weeks to birth

B. This chart shows detailed month-by-month changes:

FIRST MONTH:	Fertilization occurs Zygote implants itself in the lining of the uterus ending the zygote period Rapid cell division occurs Embryonic stage lasts from end of the 2nd week to end of the 8th week Cells differentiate into three distinct layers: the ectoderm, the mesoderm, and the endoderm Nervous system begins to develop Embryo is 1/2 inch long
SECOND MONTH:	Heart and blood vessels form Head area develops rapidly Eyes begin to form detail Internal organs grow, especially the digestive system Sex organs develop rapidly and sex is distinguished Arms and legs form and grow Heart begins to beat faintly Embryo is 1 inch long and weighs 1/10 ounce
THIRD MONTH:	Head growth occurs rapidly Bones begin to form rapidly, which marks the transition to the fetal stage The digestive organs begin to function Arms, legs, and fingers make spontaneous movements Fetus is 3 inches long and weighs 1 ounce
FOURTH MONTH:	Lower parts of the body show rapid growth Bones are distinct in X-ray films Reflex movement becomes more active Heartbeat detected by physician Sex organs are fully formed Fetus is 7 inches long and weighs 5 ounces
FIFTH MONTH:	Mother begins to feel reflex movements A fine, downy fuzz covers the entire body Vernix (a waxy coating) collects over the body Ears and nose begin to develop cartilage Fingernails and toenails begin to appear Fetus shows hiccups, thumb sucking, and kicking Fetus is 12 inches long and weighs 14 ounces
SIXTH MONTH:	Eyes and eyelids fully formed Fat is developing under the skin Fetus is 14 inches long and weighs 2 pounds
SEVENTH MONTH:	Cerebral cortex of brain develops rapidly Fetus is 17 inches long and weighs 3 pounds
EIGHTH MONTH:	Subcutaneous fat is deposited for later use Fingernails reach beyond the fingertips Fetus is 17 inches long and weighs 5 pounds
NINTH MONTH:	Hair covering the entire body is shed Organ systems function actively Vernix is present over the entire body Fetus settles into position for birth Neonate is 21 inches long and weighs 7 pounds

II. Genetic factors affecting the developing child

A. **Phenylketonuria (PKU)**

1. The absence or deficiency of an enzyme that is responsible for processing the essential amino acid phenylalanine characterizes PKU.

2. With normal enzymatic activity, phenylalanine is converted to another amino acid (tyrosine), which is then utilized by the body. However, when the phenylalanine hydroxylase enzyme is absent or deficient, phenylalanine abnormally accumulates in the blood and is toxic to brain tissue.

3. This condition is detectable during the first days of life with appropriate screening through a simple blood test.

4. Without treatment, most infants with PKU develop mental retardation and may also develop additional neurologic symptoms.

B. **Sickle-cell anemia (SCA).** The following information is from the National Center for Biotechnology Information (http://www.ncbi.nlm.nih.gov/books/NBK22238/):

1. SCA is the most common inherited blood disorder in the United States, affecting about 72,000 Americans and 1 in 500 African Americans.

2. SCA is characterized by episodes of pain, chronic hemolytic anemia, and severe infections, usually beginning in early childhood.

3. SCA is an autosomal recessive disease caused by a point mutation in the hemoglobin beta gene (HBB) found on chromosome 11p15.4. Carrier frequency of HBB varies significantly around the world, with high rates associated with zones of high malaria incidence, since carriers are somewhat protected against malaria.

4. About 8% of African Americans are carriers.

5. A mutation in HBB results in the production of a structurally abnormal hemoglobin (Hb) called HbS. Hb is an oxygen-carrying protein that gives red blood cells (RBCs) their characteristic color.

6. Under certain conditions, like low oxygen levels or high hemoglobin concentrations in individuals who are homozygous for HbS, the abnormal HbS clusters together, distorting the RBCs into sickle shapes. These deformed and rigid RBCs become trapped within small blood vessels and block them, producing pain and eventually damaging organs.

7. Although, as yet, there is no cure for SCA, a combination of fluids, painkillers, antibiotics, and transfusions are used to treat symptoms and complications.

8. Hydroxyurea, an antitumor drug, has been shown to be effective in preventing painful crises. Hydroxyurea induces

the formation of fetal Hb (HbF)—aHb, normally found in the fetus or newborn, when present in individuals with SCA, prevents sickling.

9. A mouse model of SCA has been developed and is being used to evaluate the effectiveness of potential new therapies for SCA.

C. **Tay-Sachs disease (TSD)**

1. The disease is named for Warren Tay (1843–1927), a British ophthalmologist who in 1881 described a patient with a cherry-red spot on the retina of the eye, and Bernard Sachs (1858–1944), a New York neurologist whose work several years later provided the first description of the cellular changes in Tay-Sachs disease. Sachs also recognized the familial nature of the disorder, and, by observing numerous cases, he noted that most babies with Tay-Sachs disease were of Eastern European Jewish origin.

2. Tay-Sachs disease is caused by the absence of a vital enzyme called hexosaminidase A (Hex-A). Without Hex-A, a fatty substance or lipid called GM2 ganglioside accumulates abnormally in cells, especially in the nerve cells of the brain. This ongoing accumulation causes progressive damage to the cells.

3. The destructive process begins in the fetus early in pregnancy, although the disease is not clinically apparent until the child is several months old. By the time a child with TSD is 3 or 4 years old, the nervous system is so badly affected that life itself cannot be supported. Even with the best of care, all children with classical TSD die early in childhood, usually by the age of 5.

4. A baby with Tay-Sachs disease appears normal at birth and seems to develop normally until about 6 months of age. The first signs of TSD can vary and are evident at different ages in affected children.

5. Initially, development slows, there is a loss of peripheral vision, and the child exhibits an abnormal startle response.

6. By about 2 years of age, most children experience recurrent seizures and diminishing mental function. The infant gradually regresses, losing skills one by one, and is eventually unable to crawl, turn over, sit, or reach out. Other symptoms include increasing loss of coordination, progressive inability to swallow, and breathing difficulties. Eventually, the child becomes blind, mentally retarded, paralyzed, and nonresponsive to his or her environment.

D. **Down syndrome**

1. Named after John Langdon Down, the first physician to identify the syndrome, Down syndrome is the most frequent genetic cause of mild to moderate mental retardation and associated medical problems and occurs in 1 out of 800 live births, in all races and economic groups.

2. Down syndrome is a chromosomal disorder caused by an error in cell division that results in the presence of an additional third chromosome 21, or trisomy 21. (http://www.nlm.nih.gov/medlineplus/downsyndrome.html).

III. Environmental factors (also called teratogens)

A. **Rubella:** About 25% of babies whose mothers contract rubella during the first trimester of pregnancy are born with one or more birth defects, which, together, are referred to as congenital rubella syndrome.

1. These birth defects include eye defects (resulting in vision loss or blindness), hearing loss, heart defects, mental retardation, and, less frequently, cerebral palsy.

2. Many children with congenital rubella syndrome are slow in learning to walk and do simple tasks, although some eventually catch up and do well.

3. The infection frequently causes miscarriage and stillbirth.

4. The risk of congenital rubella syndrome drops to around 1% after maternal infection in the early weeks of the second trimester, and there is rarely any risk of birth defects when maternal rubella occurs after 20 weeks of pregnancy.

5. Some infected babies have health problems that aren't lasting. They may be born with low birth weight (less than 5.5 pounds) or have feeding problems, diarrhea, pneumonia, meningitis (inflammation around the brain), or anemia. Red-purple spots may show up on their faces and bodies because of temporary blood abnormalities that can result in a tendency to bleed easily. The liver and spleen may be enlarged.

6. Some infected babies appear normal at birth and during infancy. However, all babies whose mothers had rubella during pregnancy should be monitored carefully because problems with vision, hearing, learning and behavior may first become noticeable during childhood.

B. Fetal alcohol syndrome: Alcohol consumption during pregnancy—when it results in fetal alcohol syndrome—has emerged as one of the leading causes of mental retardation.

IV. Reflexes, temperaments, and abilities of newborns

A. Motor development milestones or stages (provided in respective average ages):

1. **1 month:** Rolls over

2. **1 month:** Grasps rattle

3. **6 months:** Sits without support

4. **7 months:** Stands holding on

5. **8 months:** Grasps with thumb and finger

6. **11 months:** Stands well alone

7. **12 months:** Walks well alone

8. **15 months:** Builds tower of two cubes

9. **17 months:** Walks up steps

10. **24 months:** Jumps in place

B. Reflexes present at birth (mediated by the hindbrain and spinal cord):

1. **Grasping reflex:** Holds a finger or other object firmly

2. **Rooting reflex:** Turns head when touched on cheek

3. **Gag reflex:** Clears the throat

4. **Startle reflex:** Flings out the arms, fans the fingers, and arches the back in response to a sudden noise

5. **Sucking reflex:** Sucks objects placed in mouth

6. **Babinski reflex:** Curls toes when outer edge of sole of foot is stroked

V. Cultural influences

A. Various cultural differences regarding care for infants demonstrate a rich display of the important influence culture plays on development soon after birth. Some examples are cultural differences in breastfeeding versus bottle feeding, parents' sleeping in the same bed as their infant (called co-sleeping) or having the infant sleep in a crib or bassinet, and when a child first eats solid food. See Arnett (2012) for examples.

B. Worldwide infant mortality rates also exhibit stark differences; see https://cia.gov/library/publications/the-world-factbook/rankorder/2091rank.html for example.

LESSON 4: INFANCY AND CHILDHOOD

I. Perceptual abilities and intelligence

A. Habituation, the decrease in response to a stimulus that occurs after the same stimulus is repeatedly presented, is used to measure an infant's awareness. If the stimulus is changed enough, dishabituation occurs, and the infant shows an awareness of the change. The processes of habituation and dishabituation can be used to study attention, sensory and perceptual discrimination, and memory in infants.

B. Within a few days of birth, infants can recognize their own mother's voice, can distinguish between their own and foreign languages, and can discriminate between closely related sounds.

C. By 7 months, infants can discriminate all sounds relevant to language production.

D. Newborns show a preference for sweet tastes.

E. Visual perception proceeds rapidly:

1. **1 month:** color perception

2. **4 months:** focus on near or far objects

3. **4-5 months:** recognition of two- and three-dimensional objects

4. **7 months:** different responses to different facial expressions, such as smiles or frowns

II. Communication and language

Theories of language acquisition in childhood

A. According to the nativist theory of **Noam Chomsky**, children are born with innate abilities to acquire a universal grammar; the specific language they acquire depends on the language to which they are exposed.

B. Learning theory proposes, alternatively, that language acquisition depends entirely on processes of imitation and selective reinforcement of a specific language.

III. Stages of language acquisition

A. **3 months–1 year:** Babbling, in which children produce meaningless sounds; during this time, children may go through a critical period in which they are particularly sensitive to language cues. Note that there are cultural differences in how often and in what manner adults talk to young children (e.g., in some cultures, adults engage in frequent baby talk with young children; in other cultures, adults speak less often to children).

B. **1 year:** Children start to produce simple short words that begin with a consonant sound; however, they understand more than they can speak.

C. **18 months:** Children put together short phrases, called telegraphic speech because the children leave out words not critical to the message such as the articles “a” and “the” and instead focus on verbs and nouns (in today’s parlance, perhaps this might be called texting speech!).

D. **3 years:** Children are starting to use grammar and develop larger vocabularies, but they make errors, called overgeneralization, in which they might use incorrect grammar such as saying “runned” for the past tense of “run” instead of “ran.”

E. **5 years:** Children begin to use the basic rules of language but not a full vocabulary; they do not have the ability to understand and use subtle grammatical rules.

IV. Childhood

A. Physical and motor development

1. In the first 12 months, children triple their birth weight and double their height.

2. From age 3 to age 13, children gain about 5 pounds and 3 inches' height per year. However, the proportions of the body also change such that the head grows at a slower rate than the rest of the body.

See Activity 4.1: Early Motor and Verbal Development (in Activities section)

B. **Memory and thinking:** Children become better able to organize and use information in tasks involving memory and problem solving as they age. They become much faster at processing new information, can pay attention to stimuli for longer periods, can distinguish between different stimuli, and are less easily distracted.

1. A preschooler can remember two to three chunks of information in short-term memory.

2. A 5-year-old can remember four chunks of information in short-term memory.

3. A 7-year-old can remember five chunks of information in short-term memory (which is close to the number that adults can remember (seven)).

4. The amount of information in a chunk also grows with age. Children also gain awareness of their own cognitive processes (i.e., metacognition), which accelerates in middle childhood.

C. Social, cultural, and emotional development

1. By the age of 2 years, children begin to become more independent from family and more likely to play with friends; although they begin playing primarily with toys and not each other, as they get older, they begin to play more interactively.

2. By the preschool-and school-age years, children play more elaborate games with each other. They also learn to be more polite, regulate their emotional displays, and modify one another's behavior.

D. Parenting styles also seem to affect the child's development. According to research by **Diana Baumrind**, there are four categories of childrearing; the most positive outcomes are observed among children raised by authoritative parents.

1. **Authoritarian:** Parents who expect their children to obey them and give low emotional support

2. **Permissive:** Parents who give their children little direction but provide a lot of emotional support

3. **Authoritative:** Parents who are firm and set limits but allow flexibility and provide a lot of emotional support

4. **Uninvolved:** Parents who show little interest in their children either in regulating their behavior or providing emotional support

E. However, there are cultural variations in parenting. For example, in the United States, the value of independence is stressed more than in

countries such as Japan, which places a higher value on cooperation and life in the community. The authority of parents, particularly fathers, is important as well as it is in Latin American cultures. It is important to note that the parenting-styles model is a culturally based model that best applies to the American majority culture. See Arnett (2012) for more information.

LESSON 5: ADOLESCENCE AND EMERGING ADULTHOOD

Because students are in this phase of life, you can bring this material to life by having them talk about their own experiences. Theories of moral, cognitive, and social development provide many jumping-off points for discussions using examples from their own lives and those of their friends and family.

During this lecture, you can also ask students to comment on whether they agree with characterizing adolescence as a time of "sturm und drung" (storm and stress).

I. Physical development

A. The changes associated with puberty include development of primary and secondary sex characteristics. You can easily obtain charts showing the sequence of stages; in fact, here is an excellent set of lesson plans:

http://www.discoveryeducation.com/teachers/free-lesson-plans/changes-of-puberty.cfm

Rather than focus exclusively on physical changes, however, use the opportunity to discuss the differences between early and late-maturing boys and girls. Engage students in a discussion of why the differences in the timing of puberty have psychological and social effects.

B. If you have already presented Piaget's and Kohlberg's theories in their entirety, there is no need to cover them again. But if you have not yet done so, you can use the material presented in Lesson 2 as the basis for didactic instruction and examples.

ACTIVITY: *Ask students to give examples of television shows or movies that show the physical, cognitive, and social changes of adolescence. You can assign teams to focus on development in one particular area of influence, such as influence of peers, family, school, or socialization.*

ACTIVITY: *Have students find examples of music (or music videos) that best depict concerns of adolescents.*

II. Identity development

If you have covered Erikson's theory of psychosocial development, you can focus in this class on the concept of identity statuses.

A. According to Erikson, identity is the major psychosocial issue of adolescence. Based on Erikson's theory, **James Marcia** proposed four identity statuses to characterize a person's search for identity. In the identity diffusion status, for example, adolescents haven't committed to an identity and are not yet attempting to define their sense of self

and discover their priorities, values, and commitments. The opposite is true for the identity achievement status. Marcia proposed that many adolescents achieve an identity without going through a crisis. He referred to this as "foreclosed." Another possibility is that adolescents remained in a prolonged state of crisis, called "moratorium."

B. Marcia's four identity statuses with examples of students' behavior in each status

1. **Identity achievement:** Students have a college major and considered alternatives before deciding on that major.

2. **Identity diffusion:** Students have no major and are not particularly concerned about finding one.

3. **Foreclosure:** Students decided on a college major without exploring or going through a period of questioning.

4. **Moratorium:** Students are in crisis as they actively try to decide what to major in.

EXAMPLE—You can ask students these questions, which will give them an idea of which type they are. These are sample questions concerning careers, but you can also adapt these questions to cover values and gender role (role of men and women in society). A new area of research that may be particularly relevant to students in areas of mixed immigrant status is that of "American identity." You can ask students to describe their own process of adopting an identity as an American and to discuss how their development of a national identity presents conflict (or not) with the identities in terms of national origins.

1. Have you decided on a career?
2. What led you to that decision?
3. Did you consider any alternatives?
4. If you have not chosen a career, what are you doing to help you decide?

C. Sexual identity and adolescence: Adolescence is usually when teens start to explore their sexual identity. See the TOPSS unit lesson plan on the *Psychology of Sexual Orientation* for ways to incorporate sexual identity and sexual orientation into the high school psychology course.

III. Role of the family and peers in adolescent development

A. Family has a major formative influence on the adolescent.

B. Peers are the second major influence on adolescent development. Present different types of peer relationships and the impact of friends on personality and social development. Discuss differences among close versus peripheral friendships, the role of reciprocity in friendship, and the role of bullying.

ACTIVITY: *Ask students to categorize their Facebook friends in terms of closeness, positive or negative impact, and frequency of contact. Have students compare Facebook friends with family members on Facebook to see how their updates and messages differ from each other.*

See Activity 5: Three Tasks of Adolescent Identity: Cognitive, Moral, and Social (in Activities section)

IV. Emerging adulthood

A. Toward the end of the traditional adolescence years, individual may enter a prolonged period of extended adolescence. This period includes the college years and beyond.

B. With increases in the age of first marriage and delays in having children, emerging adulthood is becoming more of a reality, particularly in some socioeconomic groups that can afford a college education. However, in some cultures, young adults reach adulthood earlier than in other cultures.

ACTIVITY: *Ask students to compare themselves with older siblings, family friends, or neighbors in terms of the stresses they experience in their day-to-day lives. How do students feel about entering adulthood in a time of economic uncertainty? How will they make decisions about whether or not to pursue college or enter the work force right away? How will they make decisions about when to start a family?*

LESSON 6: ADULTHOOD AND AGING

This lesson covers the span of years from the 20s to the 90s (and perhaps beyond). During this lesson, you can provide students with knowledge about the aging process that will help them separate fact from fiction and become better able to make plans about their own future. This lesson can also help students develop ways of better understanding their own family members, particularly their older relatives.

I. Major physical changes

A. Although there are predictable changes in the body associated with adulthood and aging, many changes are in fact preventable. Normal age-related changes should be differentiated from diseases; the major chronic diseases in later adulthood include arthritis, cardiovascular disease, and diabetes. These are also preventable, particularly with control of diet and proper exercise.

B. Here is a brief summary of the changes that occur gradually throughout adulthood:

1. **Skin:** Changes in elastin and collagen lead to wrinkling and sagging. (“Photoaging” refers to sun damage due to sun exposure.)

2. **Body build:** Body experiences loss of bone mineral content, increase in subcutaneous fat around the torso, loss of height.

3. **Muscle mass:** Body experiences loss of muscle mass (called “sarcopenia”).

4. **Joints:** There can be an increase in cartilage outgrowths and loss of articular cartilage thickness.

5. **Aerobic capacity:** The maximum cardiac output may decrease.

6. **Hormone changes:** Climacteric involves the diminution of sex hormones; the complete loss of fertility in women is called menopause.

7. **Nervous system:** Changes in circadian rhythms lead to increase in early rising. There are also decreases in numbers of neurons and synapses.

8. **Vision changes:** Presbyopia (far sightedness) and cataracts may occur.

9. **Hearing changes:** Presbycusis (loss of ability to hear high-pitched tones) is another change.

10. **Balance:** Loss of balance can increase the risk of falling.

C. However, virtually all of these changes can be compensated for or prevented through the following measures:

1. **Physical exercise:** Participating in aerobic exercise stimulates heart rate, and resistance training maintains muscle mass and bone density.

2. **Mental activity:** Keeping mentally active can maintain brain plasticity; people with higher levels of intellectual engagement show fewer negative changes in mental activity.

3. **Regulation of diet:** Minimizing the intake of sugar reduces the chances of developing metabolic syndrome and, hence, the risk of diabetes.

4. **Avoidance of "bad habits":** Using sunscreen, wearing sunglasses, not listening to loud music, not smoking, not drinking can delay changes.

II. Major cognitive changes

A. Throughout adulthood, individuals gradually increase their response times, are less adept at solving fluid intelligence problems, and have poorer episodic memory. However, many cognitive functions are preserved, including semantic memory, verbal (crystallized) intelligence, and procedural or implicit memory. Moreover, older adults show increases in the quality called wisdom, or practical knowledge about interpersonal problems. Changes in driving ability occur due to changes in the ability to make complex decisions, but many older adults regulate their driving habits to compensate for these changes.

B. Cognitive changes are also linked to overall physical health. There are steeper declines in memory for individuals who are prone to diabetes, who do not exercise, and who do not participate in intellectually stimulating activities. People's beliefs about their memory can also influence their performance, as can the amount of psychological stress they experience.

C. Although considerable media attention is given to the increasing prevalence of dementia, specifically Alzheimer's disease, among older adults, the large majority of people 65 and older do not suffer from significant cognitive deficits.

D. Older adults show cognitive "plasticity," the ability to improve their functioning with practice, in many areas. Most recently, researchers are showing that playing videogames can help maximize reaction time and visual search. Cognitive intervention studies also show significant transfer effects from exposure to training in memory, reasoning, and spatial relations to activities of daily living.

ACTIVITY: *Instruct students to approach an older relative with questions that tap into "wisdom," such as how to handle an interpersonal conflict. Have the students rate the degree of wisdom in the responses and then have students compare this wisdom across the ages of the individuals they interviewed.*

III. Social, cultural, and emotional issues

A. The U.S. population is aging at a rapid rate with the growth of the over-65 population due to the aging of the Baby Boomer generation (born between 1946 and 1962).

B. Changes in the U.S. population will occur disproportionately by ethnic/minority group, with the largest increases between 2010 and 2050 expected in the Hispanic population.

C. Around the world, the largest increase will occur for older adults living in the developing, agrarian-based countries.

EXAMPLE—You can find ample documentation of population trends by going to this website: http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx

D. Social issues relevant to adult development and aging include age-related changes in family and work life. You likely won't have much time to cover these topics, so you can select from these topics which are likely to appeal to students:

1. **Intimacy and long-term relationships:** The median age of first marriage is rising. The divorce rate, after hitting an all-time high in 1980 is declining, in part due to an increase in age at first marriage. Definitions of marriage are also changing along with changes in legalization of same-sex marriage in the United States.

2. **Families:** Changes in families are occurring along with a decline in the percentage of families consisting of a married couple living with their biological children. As life expectancy increases, so do the number of three- and four-generation families. Reconstituted or blended families are also increasing in prevalence. Major turning points in families include the transition to parenthood when a couple has their first child and the transition to the empty nest when grown children move out of the home. However, with the economic downturn of the late 2000s, more adult children are moving back home to live with their parents. There are also increasingly large numbers of "skip generation" households in which grandparents take primary responsibility for the care of children. Cultures vary in their emphasis on family relationships, with some ethnic and racial minorities placing greater value on extended families.

3. **Jobs and career development:** The most popular vocational development theory, that of **John Holland**, proposes that people are most satisfied in their jobs when there is a fit or match between their personalities and the characteristics of the job. Changes in career patterns are occurring as the economy continues to shift, with increases in the unemployment rate, particularly for young ethnic and racial minorities. At the other end of the age spectrum, retirees are concerned about the stability of their pension or retirement payments and pressures on the Social Security system. Women and men are also facing the challenges of balancing work and family life, especially when there are young children in the home.

4. **Cultural aspects of aging:** In many societies, older adults are highly valued, but Western industrialized nations typically hold more negative views. For example, older actresses are not regarded as being attractive and have a more difficult time being cast in starring roles. However, attitudes seem to be shifting, and there is greater cultural acceptance of older people in general, including older leading ladies and other performers.

ACTIVITIES: *Depending on which areas you emphasize, you can give students assignments in which they focus on family, work life, or cultural issues in general. For an activity specifically related to grandparenting, ask students to talk about what they've learned from their grandparents, whether it's a skill, a language, or a connection to their cultural heritage. An activity that can be used in the area of jobs is to have students describe their ideal jobs and see how well the ideal jobs match their personalities using the O*NET website (http://www.onetonline.org/).*

See Activity 6: Bridging the Generation Gap: Interviewing a Senior Citizen About Adolescence (in Activities section)

IV. Personality and aging

If you have not already covered Erikson's theory, you should cover it here—particularly his views about generativity and ego integrity.

A. The midlife crisis is a concept that is constantly being discussed in the media, but researchers do not find that it is a widespread phenomenon at all. Most people develop gradually through adulthood without undergoing a distinct transition in their 40s. The debate about whether personality is stable versus whether it can change in adulthood seems to have subsided as researchers investigating long-term patterns of personality find that shifts can occur even into the decades of the 80s and beyond.

B. Socioemotional selectivity theory proposes that as endings occur, people try to focus on their relationships that are most positively fulfilling; consequently, as a theory of aging, the theory proposes that older people prefer to spend time with people who enhance their well-being.

C. Other personality theories of aging propose that as people get older, they are better able to manage their emotions, cope more effectively with stress, and engage in fewer self-defeating and acting-out behaviors.

ACTIVITY: *Ask students to provide examples of movies, TV shows, or magazine articles that depict the midlife crisis. The examples can also be drawn from relatives or friends. Then, ask the students to discuss the examples critically from the standpoint of alternative explanations.*

ACTIVITY: *Ask students to project their personalities into the future by completing a "life drawing." They can indicate the major age periods of their lives and give a brief description of what they think they'll be like at those ages.*

V. Other issues on adulthood and aging

A. **Death and dying:** If you choose to cover the topic of death and dying, it would be valuable to emphasize not only the work of **Elisabeth**

Kubler-Ross, who is identified with the five stages of dying (denial, anger, bargaining, depression, acceptance). Instead, focus on recent work on end-of-life issues, including the topics of advance directives, palliative care, hospices, and assisted suicide. Advance directives are legal documents that allow you to convey your decisions about end-of-life care ahead of time (for example, see http://www.nlm.nih.gov/medlineplus/advancedirectives.html).

ACTIVITY: *Ask students to reflect on cultural differences in perspectives toward death and dying; for example, how might one's culture or religious beliefs about the afterlife affect the way a person views the death of a loved one?*

B. **Successful aging:** As a positive and upbeat way to end this unit, cover the topic of successful aging, defined as maintaining physical health, cognitive vitality, freedom from illness, and vital engagement with others. Many productive and creative individuals have maintained their contributions throughout their later years. You can also emphasize the fact that the majority of older adults have high levels of subjective well-being and have optimistic views about their lives.

ACTIVITY: *Ask students to bring in examples of people who illustrate productivity and creativity in later adulthood, including contemporary writers, artists, scientists, and musicians.*

activity 1.1
introductory survey and content discussion

Developed by
Michael Sullivan
Hopkinton High School, Hopkinton, MA

CONCEPT

One valuable instructional tool involves identifying and building upon what the students already know. Introductory surveys like the following can serve that purpose, while also helping you anticipate likely areas of confusion in the unit to come.

The distinction between assimilation and accommodation can be a trouble spot for students. Their responses to items #12 and #13 might serve as a starting point for examination of those two Piagetian concepts. Such preliminary floating of difficult concepts is not by any means a foolproof teaching method, and you almost surely have to re-teach the terms later in the unit. But this early exposure may help your students down the road.

Some possible talking points are included for all the items after the survey. It may seem like too big an investment of time to spend an entire class session on this survey, but your content discussion, in which you use the student responses to identify many themes and concepts in development, can actually save time in the end.

MATERIALS

The Introductory Survey (See next page.)

(activity 1.1 *continued on next page*)

(activity 1.1 *continued from previous page*)

INTRODUCTORY SURVEY

Label each of the items using the following scale:

1	2	3	4	5	6	7
Strongly Disagree			Agree			Strongly Agree

1. __ Our physical development is mostly a matter of nature—that is, physical development will unfold largely because of things that are inborn.

2.__Our cognitive development (remembering, thinking, planning, decision making, etc.) is mostly a matter of nature—that is, cognitive development will mostly unfold because of what is inborn.

3. __Our social development (attachment to others, interacting appropriately and positively with others, etc.) is mostly a matter of nature—that is, social development is largely based on things that we're born with.

4.__Most physical development unfolds continuously—that is, the development is so slow and gradual that it is not readily apparent to the naked eye.

5.__Most physical development unfolds discontinuously—that is, we develop in stages, with clear breaks between the stages.

6.__If a child's parents are authoritarian (expecting obedience to orders, not seeking or welcoming the child's input, resistant to changing their minds or practices, etc.), the child will be less happy and less well adjusted as an adult.

7.__Children are born with a basic sense of right and wrong.

8.__For most adolescents, the teenage years are a time of stress, anxiety, and confusion about the present and future.

9.__For most older people, the major crisis they face is looking back at how well, or badly, they have lived their life.

10.__ Your brain keeps developing until the day you die.

11.__There are some things (like language, for example) a child must learn early in life, or it will be too late to ever learn them well.

12.__Preschool-aged children are constantly trying to fit new information into what they already know.

13.__Preschool-aged children require direct parental intervention to help them understand new things they encounter in their world.

(activity 1.1 *continued on next page*)

(activity 1.1 *continued from previous page*)

DISCUSSION

After students take the survey, you can lead a content-based discussion that foreshadows the following:

Item #1 and Item #2: Revisit whether the so-called nature/nurture debate is actually a false dichotomy; review the concept of genetic predispositions; introduce maturation and socialization.

Item #3: Revisit nature/nurture; revisit longitudinal studies; introduce attachment and parenting styles; discuss cross-cultural differences in development.

Item #4 and Item #5: Introduce continuity versus discontinuity theories.

Item #6: Revisit longitudinal studies; introduce parenting styles.

Item #7: Introduce Kohlberg on moral reasoning.

Item #8 and Item #9: Introduce Erikson's stages of psychosocial development over the life span.

Item #10: Revisit neurogenesis, brain plasticity; introduce Alzheimer's disease, dementia.

Item #11: Introduce critical period theory.

Item #12 and Item #13: Introduce assimilation and accommodation; introduce Lev Vygotsky's perspective on development.

REFERENCE

This activity originally appeared in:
Sullivan, M. (2011). *Teacher's manual for the AP psychology examination* (3rd ed.). Brooklyn, NY: D&S Marketing Systems, Inc.

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activity 1.2
nature and nurture in development

Developed by
Michael Sullivan
Hopkinton High School, Hopkinton, MA

CONCEPT
The value of this survey lies in your debriefing of it.

MATERIALS
Nature and Nurture in Development Survey (See next page.)

REFERENCE
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(activity 1.2 worksheet *continued on next page*)

(activity 1.2 worksheet *continued from previous page*)

NATURE AND NURTURE IN DEVELOPMENT SURVEY

Rate each item, using the following scale:

0	1	2	3	4	5	6	7	8	9	10
no influence						moderate influence				maximum influence

I. What role does biology (inborn) play in

a. patterns of aggressive behavior__
b. alcoholism or other addictions__
c. extroversion and introversion__
d. intelligence__
e. memory__
f. common sense__
g. depression__
h. anxiety__
i. helping behavior__
j. conscientious work ethic__

II. What role does learning/environment/nurture play in

a. patterns of aggressive behavior__
b. alcoholism and other addictions__
c. extroversion and introversion__
d. intelligence__
e. memory__
f. common sense__
g. depression__
h. anxiety__
i. helping behavior__
j. conscientious work ethic__

activity 4
early motor and verbal development

Developed by
Peter S. Fernald
University of New Hampshire
and
L. Dodge Fernald
Harvard University

CONCEPT

This activity is appropriate for classes in introductory psychology, child psychology, or any course that treats developmental sequence in infancy and childhood. It can be used in a class of any size and requires about 30 minutes, although it can go longer with more discussion. This in-class activity is a good lead-in to a discussion about the developmental sequence, the distinction between abilities that are acquired through training and those that are acquired through maturation, and early intelligence testing.

Several principles of human development, especially the cephalocaudal and proximodistal sequences and the role of maturation, are illustrated. Cephalocaudal development describes motor development and growth that occurs from the head to the feet/tail. For example, an infant can turn his or her head before achieving control of lower parts of the body. Proximodistal development describes motor development and growth that occurs from the middle of the body out to the periphery. For example, gross motor skills are achieved before fine motor skills (e.g., gaining control of arm movements before finger movements).

MATERIALS

Write the list of motor and verbal abilities (see next page) on the chalkboard, show them on a PowerPoint slide, or give a copy of the list to each student in the class.

(activity 4 worksheet *continued on next page*)

(activity 4 *continued from previous page*)

LIST OF MOTOR AND VERBAL ABILITIES

ORDER OF DEVELOPMENT	MOTOR AND VERBAL ABILITIES
__	Walks alone; says several words
__	Describes the difference between a bird and a dog
__	Turns head to follow moving object
__	Names penny, nickel, and dime
__	Climbs stairs; says many words
__	Laces shoes
__	Sits alone for one minute; says “da-da”
__	Tells how a baseball and an orange or an airplane and a kite are alike
__	Puts on shoes
__	Tells time to quarter-hour
__	Runs; uses simple word combinations
__	Walks while holding onto something

INSTRUCTIONS

Ask the students to rank the various abilities according to their developmental sequence, beginning with 1, which indicates the first ability to develop, and ending with 12, the last ability to develop. After the students have completed this task, tell them the proper sequence, which is 3, 7, 12, 1, 5, 11, 9, 6, 4, 2, 10, 8 (the order here refers to their original ranking as displayed in the original list). Then, to help students understand the sequence more clearly, put the list in its rearranged but correct order from first ability to develop (top) to last ability to develop. The list, with approximate ages, should appear as follows.

2 months Turns head to follow moving object
9 months Sits alone for one minute; says “da-da”
1 year Walks while holding onto something
1 year 3 months Walks alone; says several words
1 year 6 months Climbs stairs; says many words
2 years Runs; uses simple word combinations
3 years Puts on shoes
4 years Laces shoes
5 years Names penny, nickel, and dime
6 years Describes the difference between a bird and a dog
7 years Tells time to quarter-hour
8 years Tells how a baseball and an orange or an airplane and a kite are alike

DISCUSSION

Ask the students the following question: In what ways are the cephalocaudal and the proximodistal development indicated in the sequence just described? Coax out of the students some examples illustrated in the sequence. An example of cephalocaudal development is that a baby turns his or her head to follow a moving object before he or she walks. A sequence that suggests proximodistal development is a child puts on his or her shoes before he or she learns to lace them.

Next, tell the students to put the letter *M* beside those abilities they believe are acquired chiefly through maturation and a *T* beside those that clearly involve training. Then ask them a second question: Is there any trend or pattern with regard to the abilities that develop primarily through maturation and those for

(activity 4 worksheet *continued on next page*)

which training is also required? Elicit through discussion the following points: The first three abilities develop chiefly through maturation with regard to the motor task, but training is involved with each of the verbal tasks; the last six abilities all involve some training. Thus, it would appear that training (learning) assumes greater importance for abilities occurring later in the developmental sequence.

Finally, invite students to construct an intelligence test for infants and young children, birth through 8 years, and ask them a third question: Would it be appropriate to use some of these items in such a test? Again, through discussion, elicit the following ideas. *Intelligence,* defined in general terms, is the ability to adjust to one's environment. Placed in the correct order, the items represent a progressive increase in capacity to adapt to and deal with the environment. In fact, several of the tasks are included in standard intelligence tests. Note also the changing nature of intelligence as one ascends the age scale, from a largely motor ability early in life to greater verbal emphasis later on. Adult intelligence tests involve mostly verbal abilities.

REFERENCES AND SUGGESTED READING

Papalia, D. E. (2006). *A child's world: Infancy through adolescence* (10th ed.). New York: McGraw-Hill.

Shaffer, D., & Kipp, K. (2007). *Developmental psychology: Childhood and adolescence* (7th ed.). Belmont, CA: Wadsworth.

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Fernald, P. S., & Fernald, L. D. (2008). Early motor and verbal development. In L. T. Benjamin (Ed.), *Favorite activities for the teaching of psychology.* Washington, DC: American Psychological Association.

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activity 5
three tasks of adolescent identity: cognitive, moral, and social

Developed by
Mary Moore Vandendorpe
Lewis University

CONCEPT

This three-part discussion is designed to bring abstract theories concerning adolescent development to life and is suitable as an in-class activity for introductory and developmental psychology. It can be modified to fit available time; allow 20 minutes if it is an instructor-directed discussion emphasizing Piaget and Erikson. No materials are needed, and any size class can participate. Large classes may be broken into small discussion groups to facilitate student participation.

The cognitive theory of Jean Piaget, the moral theories of Lawrence Kohlberg, and the concept of social age-graded norms are key constructs for the study of adolescence. According to Erik Erikson (1954), the formation of identity is aided by development in these areas. More recent discussions of these theories often use the concept of *schema*, a customary way of thinking about things, rather than the concept of *stage* (Gibbs, 2003).

Piaget (1972) postulated that formal operational thought requires an ability to think hypothetically and to generate logical rules for abstract problems. Kohlberg (1986) proposed that adolescents become capable of moral reasoning and look beyond simple rewards and punishments. Kohlberg's theory is based on considerations of justice and equity. In our society, age-graded norms are not highly visible because there is no single universally recognized rite of passage. Adolescents are frequently caught between the norms for children and the norms for adults. As societies become more fragmented, conflicting norms and ideals complicate the formation of identity.

These developments make the adolescent's search for his or her own identity a difficult struggle. Cognitive changes allow the teenager to generate several potential identities and to evaluate them in a reasonably logical manner. The adolescent can question beliefs and roles handed down by the family and society while still remaining sensitive to expectations about what his or her appropriate

(activity 5 *continued on next page*)

(activity 5 *continued from previous page*)

behavior should be. A successful resolution of identity depends on the ability to coordinate all of these elements.

INSTRUCTIONS

The activity is composed of three applications of the theories and a conclusion:

1. After presenting the definition of the formal operations stage, introduce what I call the "One Leg Scenario." Ask the students, "Suppose that from this moment on, every human baby is born with only one leg. What would have to change?" Elaborate on the situation according to class questions; for example, state that one-legged babies are normal in every other way. Then ask for ideas about what would have to change. The students quickly suggest changes in clothing, as well as in architecture. They often decide, for example, that stairs would disappear; the discussion would also include ideas of what cars and sports would be like. How would people travel—using crutches, riding on scooters, or just hopping on the one leg? Have the class consider how such an event might change our ideas of normality and might introduce new targets of discrimination. In conclusion, point out the characteristics of formal operations that usually become evident from the students' contributions: hypothetico-deductive reasoning and consideration of every aspect of the problem. This can also be a lead-in to discussions about divergent thinking and problem solving.

2. Kohlberg's (1986) moral dilemma concerning Heinz and the druggist is cited in almost every text, but in my classes, two other moral dilemmas have been more realistic and interesting to undergraduates. They are: exceeding the speed limit and cheating in school.

   Instruct the class to generate every reason they can imagine for and against these behaviors. It is useful to ask them to suggest what other students might say, rather than give their own reasoning. Divide the class into small groups and have each group classify each reason according to its level of morality for Kohlberg's (1986) theory. Each group can describe an appropriate approach to encourage moral growth in an adolescent. I often do the speeding example as a large group exercise and then have the small groups discuss the second "dilemma." Discuss the difference between moral reasoning and moral behavior.

3. Students may not realize the impact of norms on our lives. Age-graded norms can be demonstrated by asking the students how a high school freshman is expected to act and how a college senior is expected to act. Students usually volunteer descriptions in terms of driving, relationships, and classroom behavior. The major point, that norms are often age graded and that they have a strong, often unrecognized effect on our lives, needs little elaboration. Point out that norms make it easier to know how to behave; they can be efficient and comfortable.

DISCUSSION

The discussion should point out how the ability to negotiate cognitive, moral, and social tasks influences the development of identity. To emphasize themes of change and consistency, ask the students to write 10 answers to the item "I am ..." in two sets—one for themselves currently and one for when they were 12 years old. Ask the students to describe the changes in their identity—such as viewpoint, sense of moral responsibility, and perception of self—that have

(activity 5 *continued on next page*)

occurred over time and also to note the similarities that have remained. Have them apply the theories discussed in this activity to their own development.

Make the point that highly industrialized Western cultures typically prize individuality, whereas traditional cultures more often value interdependence and cooperation (Hoover, 2004).

A second area of discussion relates to the strong attraction many adolescents feel for ideologies. My classes have analyzed the ways in which growing analytical ability, a stronger moral sense, and the comfort of norms can make young people vulnerable to ideological groups: political and religious extremists, cults, gangs, and social and military organizations.

Students can write responses to these exercises, discussing an example of their own thinking, how norms have influenced them, or how identity may change over time.

REFERENCES AND SUGGESTED READING

Erikson, L. (1954). *Childhood and society.* New York: W. W. Norton.

Gibbs, J. C. (2003). *Moral development and reality: Beyond the theories of Kohlberg and Hoffman.* Thousand Oaks, CA: Sage.

Gilligan, C. (1982). *In a different voice: Psychological theory and women's development.* Cambridge, MA: Harvard University Press.

Hoover, K. R. (Ed.). (2004). *The future of identity: Centennial reflections on the legacy of Erik Erikson.* Lanham, MD: Lexington Books.

Kohlberg, L. (1986). *The stages of ethical development from childhood through old age.* San Francisco: Harper & Row.

Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development, 15,* 1-12.

Thomas, R. (2004). *Comparing theories of child development* (6th ed.). Belmont, CA: Wadsworth.

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Vandendorpe, M. M. (2008). Three tasks of adolescent identity: Cognitive, moral, and social. In L. T. Benjamin (Ed.), *Favorite activities for the teaching of psychology.* Washington, DC: American Psychological Association.

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activity 6
bridging the generation gap: interviewing a senior citizen about adolescence

Developed by
Charles Blair-Broeker
Cedar Falls High School, Cedar Falls, IA

CONCEPT

Students will learn about adolescence by interviewing senior citizens about adolescence. This assignment meets several objectives, including:

- Developing research skills (interview, case study)
- Applying life span principles to personal experience

INSTRUCTIONS FOR STUDENTS

- Arrange to conduct an informal interview (more like a conversation, really) with someone who is at least 65 years old. You may interview a relative, neighbor, or member of your house of worship. You may also call a nursing home to arrange to interview a resident. If you're having trouble finding someone to interview, contact me (the teacher). Be sure to get consent, in writing, from the interviewee before conducting the interview. The consent form should acknowledge that the person being interviewed agrees to speak with you and is aware that you will be writing a report from the interview.

- Schedule at least 30 minutes to conduct the interview. Do not tape record the conversation (it makes people nervous), but do jot a few notes as you proceed. Have some topics for questions in mind before you go in, but be flexible and allow the conversation to follow its own course.

- The interview should be about adolescence as it was experienced by your interview subject. You may ask about school, friendship and dating activities, family, part-time jobs, historical events (e.g., the impact of World War II or the Great Depression). You may also ask about your subject's opinions of today's teenagers and share your opinions as the conversation develops. The communication should be a two-way street.

(activity 6 *continued on next page*)

(activity 6 *continued from previous page*)

- Prepare a two-page report about your interview. Rather than trying to summarize the whole conversation, restrict your paper to two to four topics that you found especially interesting or informative. Make sure you include your own well-reasoned opinions about each of the topics you highlight.

references and resources

REFERENCES

American Psychological Association. (2011). *National standards for high school psychology curricula.* Retrieved from http://www.apa.org/education/k12/national-standards.aspx

Arnett, J. J. (2012). *Human development: A cultural approach.* Upper Saddle River, NJ: Pearson.

ARTICLES AND BOOKS

American Psychological Association. (2004). Guidelines for psychological practice with older adults. *American Psychologist, 59,* 236-260.

Arnett, J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties.* New York, NY: Oxford University Press.

Benjamin, L. T. (Ed.) (2008). *Favorite activities for the teaching of psychology.* Washington, DC: American Psychological Association.

Benjamin, L. T., Nodine, B. F., Ernst, R. M., & Broeker, C. B. (Eds.). (1999). *Activities handbook for the teaching of psychology, Vol. 4.* Washington, DC: American Psychological Association.

Biggs, S., Phillipson, C., & Kingston, P. (1995). *Elder abuse in perspective. Rethinking aging series.* Buckingham, Philadelphia: Open University Press.

Bruer, J. T. (1999). *The myth of the first three years: A new understanding of early brain development and lifelong learning.* New York: Free Press.

Freiberg, K. (2006). *Annual editions: Human development 07/08.* New York, NY: McGraw Hill.

Fried, S. B., & Mehrotra, C. M. (1998). *Aging and diversity: An active learning experience.* Washington, DC: Taylor and Francis.

Fried, S., Van Booven, D., & MacQuarrie, C. (1993). *Older adulthood: Learning activities for understanding aging.* Baltimore, MD: Health Professions Press.

Grassian, V. (1981, 1992). *Moral reasoning: Ethical theory and some contemporary moral problems.* Upper Saddle River, NJ: Prentice Hall.

Huitt, W., & Hummel, J. (2003). *Piaget's theory of cognitive development. Educational Psychology Interactive.* Valdosta, GA: Valdosta State University. Retrieved from http://www.edpsycinteractive.org/topics/cognition/piaget.html

Kantrowitz, B., & Springen, K. (2005). A peaceful adolescence. *Newsweek, 145*(17), 58.

Leong, D. J., & Bodrova, E. (2003). Playing to learn. *Scholastic Parent & Child, 11*(2), 28. Retrieved from http://www.scholastic.com/resources/article/playing-to-learn/

Ludwig, T. E. (2004). *PsychSim 5.0: Cognitive development.* [Online Edition]. Retrieved from http://bcs.worthpublishers.com/psychsim5/Cognitive%20Development/PsychSim_Shell.html

Puterbaugh, D. (2005). Why newborns cause acrimony and alimony. (Cover story). *USA Today Magazine, 133*(2720), 26-29.

Pycha, A. (n.d.). *Jean Piaget: Father of developmental psychology.* Retrieved from http://brainconnection.positscience.com/topics/?main=fa/piaget

Remnet, V. L. (1989). *Understanding older adults: An experiential approach to learning.* Lexington, MA: Lexington Books.

Ross, K. L. (1999). *Some moral dilemmas.* Retrieved from www.friesian.com/valley/dilemmas.htm

Woolf, L. M. (1998). *Theoretical perspectives relevant to developmental psychology.* Retrieved from http://www.webster.edu/~woolflm/designs.html

Whitbourne, S. K., & Cavanaugh, J. C. (Eds.). (2003). *Integrating aging topics into psychology: A practical guide for teaching undergraduates.* Washington, DC: American Psychological Association.

VIDEOS

A&E Home Video. (Producer). (2009). *The brain* [DVD]. Available from http://shop.history.com/detail.php?p=74261&v=history&ecid=PRF-2103435&pa=PRF-2103435#tabs

Annenberg Learner and Colorado State University. (Producer). (1999). *The Mind: Teratogens and their effects on the developing brain and mind* [Video]. Available from http://www.learner.org/resources/series150.html

Arledge, E. (Producer). (2009). *NOVA ScienceNOW: Autism genes* [Video]. Available from http://www.pbs.org/wgbh/nova/body/autism-genes.html

Brinkworth, M. (Producer). (2008). *Body in numbers* [DVD]. Available from http://www.amazon.com/dp/B001NFNFIA/?tag=googhydr-20&hvadid=8127024444&ref=pd_sl_8f1j4jrbc6_e

Discovery Channel. (Producer). (2009). *Discovery health CME: Autism* [Video]. Available from http://health.discovery.com/videos/autism-videos/

Discovery Channel. (Producer). (2007). *From conception to birth* [DVD]. Available from http://store.discovery.com/from-conception-to-birth-dvd/detail.php?p=84828

Discovery Health. (Producer). (2006). *The baby human* [Video]. Available from http://health.discovery.com/videos/the-baby-human.html

Irwin, D. (Producer). (2008). *NOVA ScienceNOW: Stem cells breakthrough* [Video]. Available from http://www.pbs.org/wgbh/nova/body/stem-cells-breakthrough.html

National Geographic Video. (Producer). (2006). *Inside the womb* [Video]. Available from http://video.nationalgeographic.com/video/national-geographic-channel/specials-1 /science-technology/ngc-inside-the-womb/

National Geographic Video. (Producer). (2007). *Inside the living body* [DVD]. Available from http://shop.nationalgeographic.com/ngs/product/dvds/science-and-space/inside-the-living-body-dvd

PBS Home Video. (Producer). (2001). *Secret life of the brain* [DVD]. Available from http://www.shoppbs.org/product/index.jsp?productId=1402865&cp=2729315.2951547&parentPage=family

PBS (Producer). (2008). *Depression: Out of the shadows* [DVD]. Available from http://www.shoppbs.org/product/index.jsp?productId=3097517&cp=2729309.2883338&parentPage=family

PBS. (Producer). (2006). *Frontline: Living old* [DVD]. Available from http://www.shoppbs.org/product/index.jsp?productId=2537118&cp=2729309.2883334&pg=2&parentPage=family

PBS. (Producer). (2008). *The human spark with Alan Alda* [DVD]. Available from http://www.shoppbs.org/product/index.jsp?productId=3939596

PBS. (Producer). (2002). *Make up your mind* [Video]. Available from http://www.pbs.org/saf/1302/video/watchonline.htm

PBS. (Producer). (2001). *Growing up different* [Video]. Available from http://www.pbs.org/saf/1205/video/watchonline.htm

Talking Eyes Media. (Producer). (2003). *Aging in America: The years ahead* [DVD]. Available from (http://talkingeyesmedia.org/aging-in-america

Wenman, A., & Bailey, A. (Producers). (2005). *Apache girl's rite of passage* [Video]. Available from http://video.nationalgeographic.com/video/places/countries-places/united-states/us-apachegirl-pp/

WGBH Boston & American Psychological Association. (Producers). (2001). *Discovering psychology: The developing child* [Video]. Available from http://www.learner.org/vod/vod_window.html?pid=1502

WEBSITES

APA Website

The APA website presents a wealth of information on psychology, psychological research, and related news.
http://www.apa.org

APA Website: Topics—Aging

The APA website features a compilation of resources related to the topic of aging.
http://www.apa.org/topics/aging/index.aspx

APA Office on Aging

The Office on Aging is a coordination point for APA activities pertaining to aging and geropsychology. The Office on Aging also supports the work of the APA Committee on Aging.
www.apa.org/pi/aging

APA Divisions

APA's 54 divisions are interest groups organized by members. Some represent subdisciplines of psychology (e.g., experimental, social, or clinical), while others focus on topical areas such as aging, ethnic minorities, or trauma. Each division has its own officers, website, publications, electronic lists, awards, convention activities, and meetings.
http://www.apa.org/about/division/index.aspx

- **APA Division 2: The Society for the Teaching of Psychology (STP)**
  The Society for the Teaching of Psychology promotes excellence in the teaching and learning of psychology. The society provides resources and services, access to a collaborative community, and opportunities for professional development. The Society for the Teaching of Psychology develops and distributes teaching and advising resources through the Office of Teaching Resources in Psychology.
  www.teachpsych.org
  http://teachpsych.org/otrp/index.php

- **APA Division 7: Developmental Psychology**
  Division 7 is composed of psychologists and other members of APA from a variety of disciplines who study or work in the area of human development.
  http://www.apa.org/about/division/div7.aspx

- **APA Division 12 – Section II: Society of Clinical Geropsychology**
  The Society of Clinical Geropsychology is devoted to research, training, and the provision of psychological services for older adults (i.e., geropsychology).
  http://www.geropsychology.org/

- **APA Division 20: Adult Development and Aging**
  Division 20 works to advance the study of psychological development and change throughout the adult years. The website includes many resources for educators.
  http://www.apa.org/about/division/div20.aspx

Jean Piaget Society

Established in 1970, the society has an international, interdisciplinary membership of scholars, teachers, and researchers interested in exploring the nature of the developmental construction of human knowledge. The society was named in honor of Swiss developmentalist Jean Piaget.
http://www.piaget.org

TED Talks

This is a useful set of presentations of 20 or fewer minutes by noted researchers in technology, entertainment, and design. Many relate to psychology, and some concern general topics related to developmental psychology.
www.TED.com

discussion questions

1. Compare and contrast longitudinal and cross-sectional research models.
2. Select a research model to study the difference in egocentrism between groups of 5- and 10-year-olds. Justify your choice.
3. Evaluate the practice of using habituation to infer cognitive processes in infants.
4. Are there critical periods (as Lorenz argues in discussing imprinting goslings) in human development?
5. What are teratogens? Explain the short-term and long-term negative effects of malnutrition and unbalanced diets on babies.
6. Explain how a child might use accommodation and how a child might use assimilation when looking at animals in the zoo (*example: Comparing a horse and a zebra versus a horse and a giraffe).*
7. Compare and contrast the views of Piaget and Vygotsky.
8. Describe a civilization wherein all people lived at Kohlberg's highest stage of moral development. What would be the positive and negative aspects of such a civilization?
9. Describe how different parenting styles might apply to preparing children for different roles in the world of work.
10. Describe an environment designed specifically for an aged population. Explain how such an environment would be different from the world of today.
11. Explain why the period of adolescence lengthens in advanced societies.